

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (currently amended): A method of reducing a peak-to-average power ratio of a signal to be transmitted, the method comprising ~~the steps of:~~
 - detecting a portion of the signal being above a clipping threshold level,
 - decomposing the portion of the signal into a number of symmetric elementary functions, each with a single maximum, the number of functions being proportional to a duration of the portion of the signal, and
 - performing ~~the number of soft-clippings of the portion on the signal by means of using a scaled reference function which is subtracted from each of the elementary, the positions of the soft-clippings being given by the positions of the functions into which the portion is decomposed and such that the subtracted elementary functions reduce a peak power of said portion of the signal to be transmitted~~the respective scalings of the reference function being determined by the amplitudes of the functions,
 - wherein positions for subtracting the scaled reference function from each of the elementary functions and the scaling of the reference function are given respectively by a position of a maximum and an amplitude at the maximum of the corresponding elementary functions, such that the position of the maximum of each of the elementary functions and the

corresponding amplitude at the maximum of each of the elementary functions provide locations and amplitudes for the soft-clipping of the portion of the signal.

2. (currently amended): The method of claim 1, further comprising ~~parameterising~~determining parameters for the elementary functions by determining an amplitude value and a position value for each of the functions.

3. (canceled).

4. (currently amended): The method of claim 1, wherein the ~~step of decomposing comprises being performed by~~ minimising of

$$[P - \sum_{i=1}^N f(x_i, A_i)]^2$$

or

$$|P - \sum_{i=1}^N f(x_i, A_i)|$$

where

N : is the number of functions f which is proportional to the duration of the peak P ,

x_i : is the position of function f ,

A_i : is the amplitude of function f

P: is the portion of the signal above clipping threshold level.

5 -10. (canceled).

11. (new): A computer program product comprising computer program code means adapted to perform the method of claim 1 when the program is run on a computer.

12. (new): An electronic circuit for reducing a peak-to-average power ratio of a signal to be transmitted, the electronic circuit comprising:

a detector which detects a portion of the signal above a clipping threshold level,

a decomposing unit which decomposes the portion of the signal into a number of symmetric elementary functions each with a single maximum, wherein the number of elementary functions is proportional to a duration of the portion,

a soft-clipping unit which performs soft-clipping of the portion using a scaled reference function which is subtracted from each of the elementary functions into which the portion is decomposed and such that the subtracted elementary functions reduce the peak power of the portion of the signal to be transmitted, wherein the position for subtracting the scaled reference function from each of the elementary functions and the scaling of the reference function is given respectively by the position of the maximum and the amplitude at the maximum of the corresponding elementary function, such that the position of the maximum of each of the elementary functions and the corresponding amplitude at the maximum provide the locations and

the amplitudes for the soft-clipping of the portion of the signal above the clipping threshold level.

13. (new): An end user telecommunication device for sending a signal, the end user telecommunication device comprising an electronic circuit in accordance with claim 11.

14. (new): A telecommunication system having at least one base station comprising an electronic circuit in accordance with claim 11.

15. (new): A transmitter comprising:
means for multi-carrier synthesis to provide a multi-carrier multiplexed signal to be transmitted, and
means for reducing a peak-to-average power ratio of the signal comprising an electronic circuit in accordance with claim 11.